

AP3 Rec'd PCT/PTO 4 MAY 2006

Attorney Docket No.: P-7685-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): PALMER, Tim John et al. Examiner: HO, TAN  
Serial No.: 10/524,488 Group Art Unit: 2821  
Filed: February 14, 2005  
Title: ELECTRICALLY SMALL DIELECTRIC ANTENNA WITH WIDE  
BANDWIDTH

Mail Stop Amendment  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to 37 C.F.R. §§1.56, 1.97 and 1.98, this Information Disclosure Statement includes Form PTO/SB/08:

1. ☒ listing documents including patents, publications and other information for consideration by the Examiner, however, since the subject application was filed after June 30, 2003, copies of United States patents and/or United States patent application publications are not included in this information disclosure statement; and/or
2. ☐ listing documents including patents, publications and other information that have been previously cited or submitted to the Patent Office in prior application U.S. Serial No. \_\_\_\_\_, filed \_\_\_\_\_ which is properly identified and relied on for an earlier effective filing date under 35 U.S.C. 120 for consideration by the Examiner; however, in accordance with 37 C.F.R. 1.98(d), copies of such documents are not included in this information disclosure statement; and/or
3. ☒ listing documents including patents, publications, and other information for consideration by the Examiner, copies of which are included with this information disclosure statement;
4. ☒ listing other information for the Examiner's consideration which was cited in a communication from a foreign patent office in a counterpart foreign application, a copy of which is included with this information disclosure statement.

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SERIAL NO.: 10/524,488  
FILED: February 14, 2005  
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The information herein cited is only in fulfillment of Applicant(s) duty of candor in disclosing all information brought to Applicant(s) attention. This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art". If it should be determined that any of the listed documents do not constitute "prior art" under United States law, Applicant(s) reserve the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant(s) further reserve(s) the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each and every document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application and is evidence that the Examiner has considered the document.

This Information Disclosure Statement is being filed:

I) ☐ Within three (3) months of filing the subject Application or entry of the subject Application into the national stage or before mailing of the first Office Action on the merits of the subject Application or a request for continued examination thereof, whichever event occurs last pursuant to of 37 C.F.R §1.97 (b); or

II) ☒ After the period specified in (I) but before the mailing date of either a final Official Action under 37 C.F.R §1.113 or a notice of allowance under 37 C.F.R §1.311 , whichever occurs first and;

1. ☐ the undersigned hereby states that each item of information listed on the Form PTO-1449 was either (i) cited in a communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this Information Disclosure Statement or (ii) not cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, not known to any individual designated in §1.56(c) more than three (3) months prior to the filing of this information disclosure statement; or

APPLICANTS: PALMER, Tim John et al.  
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2. ☒ the undersigned hereby authorizes the Patent Office to charge the fee in the amount of \$180.00 under 37 C.F.R §1.17 (p) to Deposit Account 50-3355.

III) ☐ After the period in (I) and (II) but before the payment of the issue fee and,

1. The undersigned hereby states:

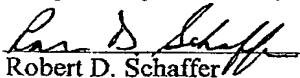
a) ☐ that each item of information cited on the form PTO-1449 was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three (3) months prior to the filing of this Information Disclosure Statement; or

b) ☐ that no items of information contained in Form PTO-1449 was cited in a communication from a foreign patent office in a counterpart foreign application, and to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement; and

2. ☐ The undersigned hereby authorizes the Patent Office to charge the Petition fee in the Amount of \$180.00 under 37 C.F.R §1.17 (p) to Deposit Account 50-3355.

Except for issue fees payable under 37 C.F.R. §1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-3355.

Respectfully submitted,



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Attorney/Agent for Applicant(s)  
Registration No. 33,775

Dated: April 24, 2006

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Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

### Complete if Known

Application Number	10/524,488
Filing Date	February 14, 2005
First Named Inventor	PALMER, Tim John
Art Unit	2821
Examiner Name	HO, TAN
Attorney Docket Number	P-7685-US

Sheet 1 of 3

### U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	A	US-09/431,548	Oct. 29, 1999	Kingsley, et al	
	B	US-5,541,616	July 30, 1996	Kawahata, et al	
	C	US-5,581,262	Dec. 3, 1996	Kawahata, et al	
	D	US-6,323,824	Nov. 27, 2001	Heinrichs, et al	
	E	US-2005/0242996	Nov. 2005	Palmer et al.	
	F	US-2001/054978	Dec. 27, 2001	Adachi, et al.	
	G	US-6,452,565	Sep. 17, 2002	Kingsley, et al	
	H	US-4,755,820	July 5, 1988	Backhouse et al.	
	I	US-4,980,694	Dec. 25, 1990	Hines	
	J	US-6,031,503	Feb. 29, 2000	Preiss, II et al.	
	K	US-6,184,833	Feb. 6, 2001	Tran	
	L	US-6,333,719	Dec. 25, 2001	Varadan et al.	
	M	US-6,337,666	Jan. 8, 2002	Bishop	
	N	US-6,819,287	Nov. 16, 2004	Sullivan et al.	

### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	O	EP 0217426	Apr. 8, 1987	Backhouse, et al		<input type="checkbox"/>
	P	EP 0762539	Mar. 12, 1997	Tsuru, et al		<input type="checkbox"/>
	Q	EP 0767510	Apr. 9, 1997	Kawahata, et al		<input type="checkbox"/>
	R	EP 0801436	Feb. 23, 2000	Ittipiboon, et al		<input type="checkbox"/>
	S	GB 064877	Jun. 17, 1981	Hall		<input type="checkbox"/>
	T	GB 2268626	Jan. 12, 1984	Fray		<input type="checkbox"/>
	U	GB 2393039	Mar. 17, 2004	Palmer, et al		<input type="checkbox"/>
	V	JP 09172306	Jun.30, 1997	Kenichi		<input type="checkbox"/>
	W	JP 07249927	Sep. 26, 1995	Yamaki, et al		<input type="checkbox"/>
	X	JP 10163738	Jun. 19, 1998	Shiiba, et al		<input type="checkbox"/>
	Y	JP 2257702	Oct. 18, 1990	Kawabata		<input type="checkbox"/>
	Z	JP 09/172306	Jun. 30, 1997	Kenichi		<input type="checkbox"/>
	AA	EP 0801436	Oct. 15, 1997	Ittipiboon, et al.		<input type="checkbox"/>

Examiner Signature		Date Considered	
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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/524,488
				Filing Date	February 14, 2005
				First Named Inventor	PALMER, Tim John
				Art Unit	2821
				Examiner Name	HO, TAN
Sheet	2	of	3	Attorney Docket Number	P-7685-US

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		Number-Kind Code <sup>2</sup> (if known)			
		US-			
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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	AB	GB 2046530	Nov. 12, 1980	Hall, et al.		<input type="checkbox"/>
	AC	JP 01144801	Jun. 7, 1989	Hiroyuki		<input type="checkbox"/>
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Examiner Signature	Date Considered
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				Filing Date	February 14, 2005
				First Named Inventor	PALMER, Tim John
(use as many sheets as necessary)				Art Unit	2821
				Examiner Name	HO, TAN
Sheet	3	of	3	Attorney Docket Number	P-7685-US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	AD	Leung K W, et al. "Low Profile Circular Disk DR Antenna of Very High Permittivity Excited By a Microstripline." Electronics Letters, IEE Stevenage, GB, vol. 33, no. 12, 5 June 1997 (1997-06-05), pages 1004-1005, XP0067576. Issn: 0013-5194. Figure 1.	<input type="checkbox"/>
	AE	Luk K M, et al. "Technique for Improving Coupling Between Microstripline and Dielectric Resonator Antenna." Electronics Letters, IEE Stevenage, GB, vol. 35, no. 5, 4 March 1999 (1999-03-04), pages 357-358, XP006011858. Issn: 0013-5194. Figure 2.	<input type="checkbox"/>
	AF	PETOSA, A., ITTIPIBOON, A., ANTAR, Y.M.M., ROSCOE, D., and CUHACI, M.: "Recent Advances in Dielectric-Resonator Antenna Technology", IEEE Antennas and Propagation Magazine, 1998, 40, (3), pp 35 - 48.	<input type="checkbox"/>
	AG	LEUNG, K.W.: "Simple Results for Conformal-Strip Excited Hemispherical Dielectric Resonator Antenna", Electronics Letters, 2000, 36, (11).	<input type="checkbox"/>
	AH	TAM, M.T.K. and MURCH, R.D.: "Half Volume Dielectric Resonator Antenna Designs", Electronics Letters, 1997, 33, (23), pp 1914 - 1916.	<input type="checkbox"/>
	AI	Office Action dated March 7, 2006 Application number 10/514,108	<input type="checkbox"/>
	AJ	ITTIPIBOON, A., MONGIA, R.K., ANTAR, Y.M.M., BHARTIA, P. and CUHACI, M.: "Aperture Fed Rectangular and Triangular Dielectric Resonators for use as Magnetic Dipole Antennas", Electronics Letters, 1993, 29, (23), pp 2001-2002.	<input type="checkbox"/>
	AK	KINGSLEY, S.P. and O'KEEFE, S.G.: "Beam steering and monopulse processing of probe-fed dielectric resonator antennas", IEE Proceedings - Radar Sonar and Navigation, 146, 3, 121 - 125, 1999.	<input type="checkbox"/>
	AL	LONG, S.A., McALLISTER, M.W., and SHEN, L.C.: "The Resonant Cylindrical Dielectric Cavity Antenna", IEEE Transactions on Antennas and Propagation, AP-31, 1983, pp 406-412.	<input type="checkbox"/>
	AM	McALLISTER, M.W., LONG, S.A. and CONWAY G.L.: "Rectangular Dielectric Resonator Antenna", Electronics Letters, 1983, 19, (6), pp 218-219.	<input type="checkbox"/>
	AN	MONGIA, R.K. and BHARTIA, P.: "Dielectric Resonator Antennas - A Review and General Design Relations for Resonant Frequency and Bandwidth", International Journal of Microwave and Millimetre-Wave Computer-Aided Engineering, 1994, 4, (3), pp 230-247.	<input type="checkbox"/>
	AO	MONGIA, R.K., ITTIPIBOON, A., ANTAR, Y.M.M., BHARTIA, P. and CUHACI, M.: "A Half-Split Cylindrical Dielectric Resonator Antenna Using Slot-Coupling", IEEE Microwave and guided Wave Letters, 1993, Vol. 3, No. 2, pp 38-39.	<input type="checkbox"/>
	AP	PETOSA A, et al. "Bandwith improvement for a microstrip-fed series array of dielectric resonator antennas." Electronics Letters, IEE Stevenage, GB, vol. 32, no. 7, 28 March 1996 (1996-03-08), pages 608-609, XP006004963. Issn: 0013-5194. Figure 1.	<input type="checkbox"/>

Examiner Signature	Date Considered
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